

UNITED STATES NAVAL OBSERVATORY

CIRCULAR NO. 71

U. S. Naval Observatory, Washington 25, D. C.

March 18, 1957

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS

JUNE-JULY, 1956

By Winifred Sawtell Cameron

These results are based upon measurements made at the Naval Observatory on plates secured either there or at the Mt. Wilson Observatory. The symbols used for the entries in the successive columns are as follows:

- U.T., the epoch of observation in Universal Time.
- No., the identifying number of the group assigned by Mt. Wilson.
- Δl , the heliographic difference in longitude from the central meridian, measured positive to the west.
- φ , the heliographic latitude, measured positive to the north.
- ρ , the heliocentric angular distance from the line joining the centers of the Earth and Sun.
- A , the true area of the umbra plus penumbra, expressed in millionths of the visible hemisphere.
- s , the number of spots.

An asterisk means that no Mt. Wilson number was assigned. Plates secured at the Naval Observatory are indicated by N, and those at Mt. Wilson by M. The plate quality, which follows, is indicated by:

- 1, Poor; 2, Fair; 3, Good; 4, Very Good; 5, Excellent.

The following five quantities are listed successively at the end of each day, and give for that day:

1. The total number of groups, g .
2. The longitude of the central meridian, L_0 .
3. The latitude of the center of the disc, B_0 .
4. The total value of A .
5. The total value of s .

The mean daily area and the mean relative sunspot number, $r=10g+s$ are given at the end of the month.

These results are a continuation of those published in the *Monthly Weather Review* from February 1, 1927 to December 31, 1947.

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U.T.	No.	Δl	φ	ρ	A	s	U.T.	No.	Δl	φ	ρ	A	s	
1,508	11648	-64	+24	67	194	1		11641	+34	-14	37	32	1	
N-5	11645	-35	+23	42	145	2		11641	+36	-15	39	388	1	
	11645	-34	+22	41	73	5		(5) (206)	(0)		2235	21		
	11645	-33	+23	40	48	2								
	11645	-30	+22	37	16	3		4,510	11652	-75	+18	76	73	1
	11645	-28	+21	35	73	5		N-4	11651	-50	-16	53	32	2
	11645	-27	+20	34	48	2			11651	-50	-17	53	12	1
	11645	-27	+22	35	12	2			11651	-48	-16	51	6	1
	11645	-26	+23	35	97	6			11651	-46	-18	49	61	6
	11645	-23	+21	32	97	3			11648	-26	+24	35	170	1
	11644	-24	+23	34	121	4			11645	+4	+24	25	73	3
	11644	-20	+23	32	121	1			11645	+9	+23	25	24	3
	11643	-20	+16	26	6	1			11645	+12	+23	26	24	3
	11643	-18	+16	25	170	1			11645	+13	+22	26	97	9
	11641	-5	-18	17	48	2			11645	+14	+23	27	242	5
	11641	-3	-17	16	24	4			11645	+15	+25	29	12	1
	11641	0	-13	13	12	2			11645	+16	+24	29	145	3
	11641	+3	-16	15	48	4			11645	+16	+22	27	170	3
	11641	+5	-16	16	12	1			11645	+18	+24	30	242	3
	11641	+6	-14	15	16	3			11643	+20	+16	26	145	3
	11641	+7	-12	14	16	2			11641	+34	-19	39	6	1
	11641	+8	-15	16	436	5			11641	+35	-17	39	6	1
	11640	+23	-16	27	32	3			11641	+45	-15	47	6	1
	11640	+25	-15	28	48	4			11641	+46	-13	48	12	1
	(6) (234)	(-1)			1913	68			11641	+48	-14	50	364	3
2,667	11651	-74	-16	75	12	1		(6) (194)	(0)		1922	55		
M-4	11651	-72	-16	73	97	1		5,518	11652	-60	+18	62	24	2
	11648	-48	+25	53	145	1		N-3	11651	-36	-17	40	24	4
	11645	-20	+24	32	6	2			11651	-36	-18	41	12	2
	11645	-20	+25	33	121	4			11651	-35	-15	38	32	1
	11645	-17	+25	31	24	5			11651	-35	-16	39	12	2
	11645	-15	+24	29	16	6			11651	-31	-17	35	97	5
	11645	-14	+24	28	12	2			11648	-13	+24	28	194	1
	11645	-13	+23	27	16	4			11653	-8	-20	22	12	1
	11645	-11	+24	26	48	4			11653	-7	-20	22	12	1
	11645	-11	+22	24	24	3			11653	-5	-19	20	32	2
	11645	-6	+23	24	291	6			11645	+16	+23	28	61	1
	11644	-9	+25	26	32	5			11645	+19	+24	31	48	1
	11644	-7	+24	25	170	14			11645	+23	+22	32	12	1
	11644	-5	+26	26	12	1			11645	+27	+23	35	436	7
	11644	-4	+25	25	97	4			11645	+28	+25	37	16	2
	11644	-3	+24	24	97	1			11645	+30	+24	37	218	2
	11643	-6	+18	20	6	2			11645	+32	+24	39	218	2
	11643	-3	+17	17	170	1			11645	+32	+22	38	16	2
	11641	+8	-19	22	6	1			11643	+33	+17	37	97	1
	11641	+9	-18	21	32	1			11641	+60	-14	62	533	4
	11641	+12	-17	21	6	3			11641	+62	-11	64	48	2
	11641	+15	-16	23	12	3		(7) (181)	(0)		2154	46		
	11641	+17	-16	24	6	6		6,521	11655	-80	-31	81	242	1
	11641	+19	-14	24	24	4		N-3	11652	-47	+19	50	32	1
	11641	+23	-15	27	388	10			11651	-23	-16	28	36	1
	11640	+36	-17	40	16	3			11651	-23	-17	29	12	1
	11640	+41	-15	43	36	3			11651	-21	-16	26	12	1
	11650	+44	+23	49	6	1			11651	-17	-17	24	36	2
	11650	+45	+23	50	6	1			11648	0	+25	25	194	1
	11650	+46	+22	50	12	2			11653	+4	-17	18	6	1
	(8) (219)	(0)			1946	105			11653	+4	-21	22	12	2
3,606	11651	-56	-17	58	48	1			11653	+5	-17	18	6	1
N-1	11648	-36	+24	42	242	1			11653	+6	-17	19	6	1
	11645	-8	+23	24	145	2			11653	+6	-19	21	16	1
	11645	-2	+22	23	48	1			11653	+7	-19	22	48	1
	11645	0	+21	21	97	1			11653	+8	-18	21	73	5
	11645	0	+23	23	24	1			11645	+30	+24	38	61	1
	11645	+1	+22	22	73	2			11645	+36	+24	43	24	2
	11645	+3	+23	24	242	2			11645	+41	+24	46	388	6
	11645	+6	+22	23	194	1			11645	+44	+25	50	242	2
	11645	+7	+23	24	339	4			11645	+46	+26	52	194	4
	11643	+8	+16	19	194	1			11645	+46	+24	51	61	1
	11641	+23	-18	29	48	1								
	11641	+29	-14	33	121	1								

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U. T.	No.	Δl	φ	ρ	A	s	U. T.	No.	Δl	φ	ρ	A	s
	11643	+46	+18	49	73	2		11660	-80	+22	80	339	1
	11641	+75	-13	76	436	2	11.524	11660	-73	+24	74	145	1
	11641	+78	-12	79	73	1	N-4	11659	-69	+21	70	145	2
	(8) (168) (0)				2283	41		11658	-63	+29	66	24	1
7.509	11655	-76	-35	78	32	2		11658	-55	+26	58	48	1
N-2	11655	-71	-32	75	145	2		11657	-56	+14	56	24	1
	11655	-70	-31	74	48	1		11657	-55	+13	56	6	1
	11655	-68	-32	71	194	1		11657	-50	+12	52	12	2
	11652	-34	+20	39	24	1		11655	-24	-29	38	24	2
	11654	-11	-25	26	6	2		11655	-17	-29	35	24	2
	11651	-10	-15	18	12	1		11655	-16	-30	35	97	1
	11648	+13	+25	28	182	1		11648	+67	+26	69	97	1
	11653	+16	-17	24	24	3		11653	+75	-14	76	48	1
	11653	+16	-19	25	73	4		(7) (102) (+1)			1033	17	
	11653	+18	-16	25	6	2	12.518	11659	-68	+22	69	97	3
	11653	+18	-20	27	6	1	N-4	11659	-66	+21	66	12	1
	11653	+19	-17	26	12	2		11659	-63	+18	64	12	1
	11653	+21	-17	26	61	4		11659	-61	+21	62	16	1
	11653	+22	-17	28	48	3		11659	-55	+21	56	194	2
	11653	+23	-18	29	12	1		11660	-60	+24	62	121	1
	11645	+43	+24	48	16	1		11658	-45	+27	50	6	1
	11645	+53	+24	56	388	3		11658	-42	+27	48	36	1
	11645	+56	+25	60	388	3		11657	-43	+14	45	24	1
	11645	+57	+24	61	121	2		11655	-11	-29	33	12	1
	11645	+58	+25	62	48	1		11655	-5	-33	34	6	1
	11643	+58	+18	61	48	1		11655	-5	-27	29	24	2
	(8) (155) (0)				1894	42		11655	-4	-29	31	97	6
8.510	11655	-64	-29	68	97	3		11655	-2	-26	26	12	1
N-4	11655	-64	-34	69	48	2		11654	+53	-24	57	6	4
	11655	-57	-30	62	73	2		11654	+54	-21	56	12	1
	11655	-56	-28	60	32	3		11654	+56	-22	59	6	3
	11655	-55	-27	59	24	1		11648	+78	+27	79	121	1
	11655	-54	-30	59	218	1		(7) (88) (+1)			814	32	
	11655	-53	-32	59	6	1	13.511	11664	-80	+19	80	73	1
	11648	+26	+24	35	170	1	N-4	11662	-70	-27	73	291	1
	11653	+29	-18	34	24	4		11659	-55	+23	57	73	2
	11653	+34	-18	38	32	2		11659	-52	+21	54	24	1
	11653	+35	-18	39	73	2		11659	-42	+21	45	218	2
	11645	+67	+23	69	679	5		11661	-51	-27	56	12	1
	11645	+71	+24	74	485	3		11661	-49	-27	55	6	1
	11643	+71	+16	73	48	1		11661	-46	-26	52	16	1
	(5) (141) (0)				2009	31		11660	-47	+24	51	97	1
9.580	11655	-50	-33	56	97	1		11663	-41	+34	51	12	1
N-1	11655	-50	-28	55	97	1		11658	-33	+27	41	16	2
	11655	-43	-27	50	48	2		11658	-29	+27	38	32	1
	11655	-42	-30	50	267	4		11657	-23	+13	25	61	4
	11648	+41	+24	46	170	1		11655	+7	-26	28	32	5
	11653	+50	-20	54	73	1		11655	+8	-28	31	32	3
	11645	+80	+23	80	485	1		11655	+10	-26	28	32	5
	(4) (127) (0)				1237	11		11654	+67	-21	69	24	2
10.721	11659	-78	+23	79	242	2		(10) (75) (+1)			1051	34	
N-1	11657	-67	+16	68	97	1	14.510	11667	-85	-19	85	291	1
	11658	-64	+28	65	32	1	N-4	11666	-80	-20	80	24	1
	11655	-34	-28	44	73	1		11664	-74	+18	75	97	2
	11655	-26	-29	39	230	3		11664	-71	+19	72	36	1
	11655	-25	-26	36	48	1		11664	-69	+18	70	24	1
	11652	+3	+23	22	36	1		11664	-66	+19	67	121	1
	11654	+30	-25	38	24	1		11662	-60	-27	64	194	1
	11651	+31	-14	34	12	1		11659	-42	+23	46	73	2
	11648	+56	+25	59	170	1		11659	-39	+22	43	48	5
	11653	+65	-18	66	48	1		11659	-36	+21	40	48	2
	(9) (112) (+1)				1012	14		11659	-29	+21	35	121	4
								11665	-39	+29	47	24	3
								11665	-38	+31	46	48	1
								11660	-34	+24	40	109	1

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U.T.	No.	Δl	φ	ρ	A	s	U.T.	No.	Δl	φ	ρ	A	s
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$		
	11661	-33	-26	42	24	1		11659	+12	+22	24	16	1
	11658	-16	+27	31	24	1		11659	+14	+22	25	48	3
	11657	-15	+15	20	12	1		11660	+6	+25	25	73	1
	11657	-9	+13	15	24	1		11663	+12	+33	34	12	1
	11655	+22	-26	35	73	5		11657	+15	+11	17	16	1
	(11)	(62)	(+1)		1415	35		11668	+55	-23	58	6	1
15,503	11667	-82	-22	82	291	1		11668	+57	-23	61	6	1
N-4	11667	-70	-20	72	242	1		(11)	(21)	(+1)		2263	60
	11666	-62	-19	64	48	1	18,569	11667	-41	-21	45	291	12
	11664	-60	+17	62	145	2	M-5	11667	-41	-19	45	48	5
	11664	-59	+18	62	24	1		11667	-38	-21	44	12	3
	11664	-58	+17	61	61	2		11667	-36	-18	41	16	7
	11664	-55	+20	57	48	3		11667	-34	-21	40	12	3
	11664	-52	+19	54	291	3		11667	-34	-17	38	12	7
	11662	-46	-26	52	6	1		11667	-32	-17	37	12	3
	11662	-45	-27	52	170	1		11667	-31	-19	36	48	4
	11659	-27	+23	34	12	1		11667	-30	-20	36	61	3
	11659	-25	+22	32	12	4		11666	-23	-16	29	73	5
	11659	-22	+21	29	16	1		11666	-18	-17	26	48	4
	11659	-15	+21	24	97	4		11666	-17	-18	26	6	1
	11665	-26	+29	37	121	2		11664	-19	+20	26	436	4
	11665	-25	+31	36	170	4		11664	-17	+18	24	48	6
	11661	-23	-27	36	12	1		11664	-17	+22	26	48	5
	11661	-19	-26	34	12	1		11664	-16	+21	24	12	3
	11660	-22	+24	31	97	1		11664	-13	+22	24	6	6
	11658	-3	+27	26	16	1		11664	-11	+20	22	339	3
	11655	+36	-26	44	48	5		11664	-10	+23	23	12	4
	(10)	(49)	(+1)		1939	41		11662	-5	-25	27	97	1
16,753	11667	-68	-23	71	97	1		11665	+13	+30	31	6	1
N-2	11667	-66	-20	68	339	1		11665	+15	+29	31	24	4
	11667	-59	-19	62	36	1		11665	+16	+33	34	12	5
	11667	-55	-17	57	158	3		11665	+17	+33	35	16	3
	11666	-45	-17	48	32	2		11665	+18	+31	34	16	5
	11664	-42	+20	45	485	4		11665	+20	+32	35	145	2
	11664	-34	+20	37	436	3		11665	+21	+31	35	6	1
	11662	-30	-25	38	145	1		11659	+14	+26	28	6	1
	11665	-9	+29	30	48	2		11659	+15	+23	26	6	1
	11665	-8	+29	29	121	4		11659	+22	+20	28	16	7
	11665	-4	+31	30	339	3		11659	+23	+22	30	73	7
	11660	-4	+24	24	48	1		11659	+25	+21	31	12	3
	11659	0	+22	20	97	2		11659	+27	+21	33	16	5
	11659	+3	+21	19	24	3		11660	+19	+24	29	61	1
	11663	+2	+32	30	16	1		11657	+39	+13	41	6	1
	(8)	(32)	(+1)		2421	32		11657	+43	+14	45	6	1
17,623	11667	-56	-25	60	48	2		11657	+45	+15	46	12	2
N-4	11667	-54	-21	56	24	5	19,518	11667	-30	-25	39	6	3
	11667	-53	-23	57	291	1	N-3	11667	-30	-23	38	6	2
	11667	-50	-21	54	12	1		11667	-27	-22	36	412	7
	11667	-43	-21	47	73	4		11667	-25	-21	34	24	1
	11667	-43	-19	46	97	2		11667	-24	-20	33	12	1
	11666	-33	-19	37	6	1		11667	-23	-19	31	36	1
	11666	-31	-19	36	12	1		11667	-20	-20	29	48	2
	11664	-31	+20	35	485	4		11667	-19	-18	28	61	3
	11664	-28	+20	34	32	5		11667	-18	-21	29	48	2
	11664	-24	+20	30	436	3		11667	-17	-19	27	73	2
	11669	-27	+12	29	24	4		11667	-16	-21	26	24	1
	11662	-18	-27	33	145	1		11666	-10	-17	22	61	2
	11665	+3	+29	28	48	3		11666	-6	-17	21	16	2
	11665	+4	+33	33	48	2		11666	-4	-18	22	48	1
	11665	+5	+33	33	48	2		11664	-8	+20	20	339	4
	11665	+6	+31	31	36	3		11664	-7	+23	22	48	1
	11665	+7	+33	33	145	2		11664	-6	+21	20	16	1
	11659	+3	+24	24	16	1		11664	-6	+19	19	24	1
	11659	+8	+21	21	24	2		11664	-2	+18	16	6	1
	11659	+10	+21	22	12	1		11664	0	+21	18	436	4
	11659	+11	+23	24	24	1		11662	+7	-25	28	121	1
								11665	+25	+31	36	61	1

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U.T.	No.	Δl	φ	ρ	A	s	U.T.	No.	Δl	φ	ρ	A	s
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$		
	11665	+26	+33	39	73	2		11673	+20	+11	22	48	1
	11665	+29	+33	41	73	5		11673	+23	+12	25	61	1
	11665	+30	+34	42	194	3		11673	+23	+10	24	170	3
	11660	+30	+25	36	48	1		11664	+23	+20	29	145	1
	11670	+33	+31	42	145	7		11664	+24	+17	29	145	1
	11670	+34	+34	45	12	1		11664	+30	+19	34	194	2
	11670	+36	+34	46	109	1		11664	+32	+20	36	145	2
	11670	+36	+32	45	16	2		11666	+23	-20	32	32	1
	11659	+34	+24	39	48	2		11662	+35	-27	44	121	1
	11659	+37	+24	42	24	2		11665	+59	+30	63	24	1
	(8)	(356)	(+2)		2668	70		11665	+61	+29	64	145	1
20,569	11671	-63	+33	66	12	1		11670	+62	+29	65	388	4
M-3	11671	-58	+33	62	12	1		11670	+65	+27	68	291	4
	11667	-17	-23	30	48	7		11670	+70	+25	72	291	1
	11667	-16	-25	31	48	7		11660	+65	+26	67	73	1
	11667	-15	-20	26	242	9	(9)	(325)	(+2)		3163	43	
	11667	-13	-20	26	24	2	22,511	11676	-76	-16	78	291	1
	11667	-11	-18	23	73	5	N-4	11674	-9	-18	22	16	1
	11667	-10	-18	23	24	2		11667	+9	-23	26	48	5
	11667	-9	-18	23	16	3		11667	+11	-21	25	158	5
	11667	-6	-17	21	48	2		11667	+13	-20	26	48	6
	11667	-5	-17	21	48	6		11667	+14	-21	26	16	1
	11667	-5	-18	21	48	5		11667	+14	-19	26	61	4
	11667	-5	-20	23	24	4		11667	+15	-19	26	16	5
	11667	-3	-18	21	24	3		11667	+16	-19	27	97	2
	11667	-2	-18	21	16	3		11667	+19	-22	31	24	4
	11673	+3	+13	12	6	2		11667	+20	-17	28	48	2
	11673	+3	+15	14	12	2		11673	+26	+15	29	291	3
	11673	+5	+14	14	6	2		11673	+27	+13	29	12	1
	11666	+4	-15	17	16	2		11673	+28	+12	30	194	6
	11666	+8	-16	21	12	2		11673	+32	+13	34	364	7
	11666	+10	-17	23	12	2		11664	+31	+22	36	73	2
	11664	+5	+23	22	145	2		11664	+32	+19	35	121	1
	11664	+6	+21	19	73	4		11664	+37	+21	41	194	3
	11664	+7	+21	20	48	2		11664	+40	+22	44	97	3
	11664	+7	+24	24	12	1		11666	+33	-17	37	12	1
	11664	+8	+22	22	32	5		11662	+45	-25	51	97	1
	11664	+10	+23	23	12	3		11670	+69	+35	72	24	1
	11664	+12	+22	24	12	2		11670	+70	+34	73	582	2
	11664	+14	+20	23	6	1		11670	+75	+33	77	388	2
	11664	+15	+22	25	388	3		11670	+80	+31	80	485	1
	11662	+20	-25	34	121	1		11660	+75	+29	76	73	1
	11665	+41	+32	48	16	2	(9)	(316)	(+2)		3830	71	
	11665	+43	+34	51	48	6	23,632	11678	-74	-32	77	339	1
	11665	+45	+34	53	73	3	N-2	11677	-61	-24	65	16	1
	11665	+46	+35	54	97	5		11676	-61	-16	63	267	1
	11660	+46	+26	50	36	3		11667	+24	-21	33	242	5
	11670	+48	+33	55	291	6		11667	+26	-20	34	73	1
	11670	+50	+30	55	145	12		11667	+27	-21	35	16	1
	11670	+53	+34	60	145	4		11667	+32	-20	37	36	1
	11670	+53	+30	58	24	4		11667	+33	-20	38	121	2
	11670	+54	+33	60	48	2		11667	+35	-18	39	32	1
	11670	+55	+30	59	145	3		11673	+40	+14	42	291	5
	11659	+50	+24	54	12	2		11673	+42	+11	43	218	3
	11659	+53	+23	56	16	1		11673	+43	+13	44	133	5
	(10)	(342)	(+2)		2716	149		11673	+44	+12	45	24	1
21,849	11674	-21	-16	27	12	1		11673	+47	+13	48	630	8
N-1	11674	-20	-18	28	36	1		11664	+46	+22	49	61	2
	11667	+2	-22	24	242	3		11664	+47	+19	50	97	2
	11667	+2	-20	23	24	1		11664	+51	+21	54	218	1
	11667	+3	-21	23	48	2		11664	+54	+21	56	97	2
	11667	+5	-20	23	73	1		11666	+55	-16	58	170	1
	11667	+7	-20	24	121	3		11662	+58	-25	63	97	1
	11667	+9	-21	25	32	1		11670	+82	+32	82	388	1
	11667	+10	-19	24	48	1	(9)	(301)	(+2)		3566	46	
	11667	+11	-18	23	48	2	24,557	11681	-75	+25	77	32	1
	11673	+19	+13	23	145	1	M-5	11680	-69	-29	72	24	1
	11673	+19	+9	21	61	1							

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U.T.	No.	Δl	φ	ρ	A	s	U.T.	No.	Δl	φ	ρ	A	s
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$		
	11680	-68	-30	71	48	7	N-5	11685	-56	+18	58	12	1
	11680	-66	-32	70	36	3		11685	-55	+17	56	12	1
	11680	-64	-29	69	16	2		11685	-55	+19	56	16	1
	11680	-63	-29	68	16	2		11685	-52	+17	54	121	1
	11678	-60	-31	66	194	1		11688	-49	-30	58	24	1
	11676	-47	-14	50	145	1		11684	-46	+31	51	48	2
	11679	-26	+22	33	12	2		11684	-44	+31	50	24	1
	11667	+37	-22	44	145	10		11684	-42	+27	46	97	2
	11667	+40	-20	45	16	4		11680	-15	-30	36	61	3
	11667	+46	-20	50	73	3		11680	-14	-32	37	36	4
	11673	+54	+15	55	339	8		11680	-13	-30	35	6	1
	11673	+55	+13	56	97	12		11680	-13	-33	38	24	3
	11673	+56	+11	57	145	7		11680	-10	-32	35	97	2
	11673	+57	+13	58	97	5		11680	-9	-31	35	145	3
	11673	+64	+14	65	630	13		11678	-7	-33	37	121	1
	11666	+59	-21	63	16	1		11676	+4	-15	19	145	2
	11666	+62	-19	64	48	5		11683	+27	+18	31	6	2
	11666	+64	-19	66	6	1		11683	+31	+18	34	6	1
	11664	+60	+22	62	48	2		11687	+49	-23	56	12	1
	11664	+61	+19	63	12	2		11687	+51	-22	56	6	1
	11664	+61	+17	63	16	2							
	11664	+66	+22	67	170	3		(9)	(237)	(+3)		1407	35
	11664	+69	+21	70	97	1							
	11662	+73	-26	76	97	1							
	(10)	(289)	(+2)		2575	100	29,511	11694	-80	-26	80	242	1
25,560	11680	-58	-31	64	48	2	N-4	11690	-74	+26	76	24	1
N-2	11680	-57	-31	64	16	1		11690	-72	+26	72	32	1
	11680	-57	-32	64	48	1		11690	-70	+25	70	24	2
	11680	-50	-33	58	48	1		11690	-66	+26	68	218	2
	11678	-46	-34	56	218	1		11691	-70	-20	73	48	1
	11676	-35	-16	39	194	1		11689	-59	-23	64	12	1
	11682	+29	+21	34	36	1		11689	-54	-22	59	16	1
	11682	+30	+22	35	61	1		11685	-44	+18	45	97	9
	11667	+50	-20	54	109	1		11685	-41	+19	43	24	3
	11667	+52	-19	56	97	1		11685	-41	+17	43	48	1
	11667	+60	-17	63	48	1		11685	-37	+18	39	97	7
	11673	+67	+16	68	582	4		11688	-35	-30	47	12	1
	11673	+69	+13	70	97	2		11688	-32	-28	44	16	2
	11673	+75	+15	76	970	1		11684	-34	+32	43	48	1
	11664	+70	+23	72	36	1		11684	-33	+31	41	145	4
	11664	+78	+24	80	291	1		11684	-31	+32	40	61	2
	11664	+80	+23	80	97	1		11684	-30	+32	39	61	2
	11666	+75	-16	77	97	1		11684	-27	+28	36	291	6
	(8)	(276)	(+2)		3093	23		11693	-16	+18	22	6	1
26,506	11680	-45	-33	55	12	2		11692	-12	+23	23	12	1
N-4	11680	-40	-30	49	12	1		11680	-3	-29	33	24	4
	11680	-38	-31	48	12	2		11680	-1	-29	33	48	5
	11680	-37	-33	49	121	4		11680	0	-31	34	6	1
	11678	-34	-34	48	170	1		11680	+1	-32	35	6	3
	11676	-23	-16	29	194	2		11680	+4	-31	34	6	3
	11683	+2	+17	16	12	1		11680	+5	-30	34	121	7
	11682	+43	+23	47	16	1		11678	+5	-33	36	121	1
	11667	+62	-20	64	73	1		11676	+17	-15	25	133	1
	11673	+78	+17	79	388	1		(12)	(224)	(+3)		1999	75
	11673	+82	+16	82	582	1							
	(7)	(263)	(+2)		1592	17	30,524	11694	-80	-30	82	242	1
27,508	11680	-26	-29	41	12	2	N-3	11694	-66	-26	70	315	2
N-2	11680	-25	-33	44	133	4		11694	-66	-28	71	97	1
	11680	-23	-31	40	242	2		11691	-62	-21	65	32	1
	11678	-20	-33	40	145	1		11691	-60	-18	64	24	3
	11676	-9	-15	21	170	1		11691	-57	-20	62	170	5
	11683	+14	+18	21	12	1		11690	-62	+25	64	48	1
	11683	+16	+19	23	12	1		11690	-56	+25	59	48	5
	(4)	(250)	(+3)		726	12		11690	-52	+27	55	218	2
28,510	11690	-80	+26	80	388	1		11685	-32	+20	35	61	2
								11685	-30	+18	33	12	1
								11685	-28	+17	31	12	1
								11685	-26	+19	30	12	1
								11685	-24	+19	29	194	2
								11684	-21	+31	34	218	4
								11684	-18	+31	33	48	2
								11684	-16	+29	31	291	2

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U.T.	No.	Δl	φ	ρ	A	s	U.T.	No.	Δl	φ	ρ	A	s
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$		
	11688	-16	-28	35	16	1	N-4	11696	-76	+16	77	73	1
	11692	0	+25	23	12	2		11697	-70	-27	75	32	2
	11692	+2	+23	20	12	2		11694	-39	-29	49	145	6
	11680	+13	-28	34	36	1		11694	-38	-28	48	24	3
	11680	+14	-30	35	12	2		11694	-31	-29	44	24	2
	11680	+16	-31	36	48	4		11694	-29	-29	44	16	1
	11678	+16	-32	37	145	1		11694	-28	-27	41	6	1
	11676	+30	-15	35	133	2		11694	-26	-27	40	24	1
	(10)	(210)	(+3)		2456	51		11694	-25	-25	37	242	4
	Mean for 30 days, $A = 2047$, $r = 131.5$							11690	-27	+29	36	36	4
1.592	11694	-64	-29	69	339	1		11690	-24	+27	34	16	5
N-2	11694	-61	-25	65	436	1		11690	-15	+27	29	16	1
	11690	-49	+26	53	73	1		11690	-14	+27	28	218	1
	11690	-47	+27	52	48	1		11691	-23	-22	34	16	2
	11690	-42	+27	46	73	1		11691	-22	-19	31	12	1
	11690	-39	+28	45	291	1		11691	-16	-18	26	170	4
	11691	-46	-18	50	36	1		11684	+15	+34	34	97	4
	11691	-46	-20	51	48	1		11684	+17	+31	33	16	1
	11691	-43	-19	47	218	1		11684	+18	+34	35	16	3
	11685	-17	+20	24	73	2		11684	+24	+30	35	145	3
	11685	-9	+20	19	194	1		11684	+26	+30	36	194	4
	11684	-7	+31	28	194	2		11685	+16	+20	24	73	2
	11684	-5	+31	27	97	2		11695	+27	+25	34	97	4
	11695	0	+29	26	291	3		11695	+30	+24	35	16	1
	11693	+4	+24	22	48	2		11695	+32	+25	36	73	3
	11692	+14	+25	25	73	3		11695	+33	+25	37	24	1
	11680	+26	-28	41	48	1		11678	+55	-30	63	133	1
	11678	+30	-31	45	145	1		11676	+69	-14	71	121	1
	11676	+44	-14	46	133	1		(10)	(171)	(+3)		2123	68
	(11)	(196)	(+3)		2858	27	4.638	11699	-75	-23	76	436	1
2.527	11694	-52	-29	59	145	3	N-2	11696	-66	+17	67	16	1
N-4	11694	-51	-28	58	48	1		11696	-59	+17	61	121	1
	11694	-48	-28	56	16	2		11694	-25	-29	41	109	1
	11694	-40	-27	49	73	3		11694	-24	-28	39	73	1
	11694	-39	-26	47	388	4		11694	-20	-29	37	24	1
	11694	-38	-24	46	12	1		11694	-10	-25	30	291	1
	11690	-40	+27	45	48	3		11691	-9	-21	25	36	1
	11690	-38	+26	43	24	3		11691	-1	-18	22	158	1
	11690	-29	+27	36	48	3		11690	+1	+27	26	24	2
	11690	-26	+27	35	267	1		11690	+3	+27	25	242	1
	11691	-36	-19	42	12	1		11684	+30	+33	41	73	1
	11691	-35	-20	41	12	1		11684	+33	+33	43	48	2
	11691	-30	-18	36	145	3		11684	+40	+30	46	145	2
	11685	-6	+20	17	6	1		11684	+43	+30	49	158	2
	11685	-5	+20	17	6	1		11685	+34	+20	36	73	1
	11685	+4	+20	17	145	3		11695	+42	+25	45	48	1
	11684	+3	+32	29	121	5		11695	+44	+25	47	61	2
	11684	+4	+31	27	12	1		11695	+49	+25	53	73	1
	11684	+5	+30	27	12	1		11678	+70	-31	75	145	1
	11684	+6	+32	29	36	3		(9)	(156)	(+3)		2354	25
	11684	+7	+30	28	12	1	5.776	11699	-61	-21	65	364	1
	11684	+9	+30	28	12	3	N-2	11700	-52	+20	54	24	1
	11684	+12	+29	29	218	3		11696	-45	+19	46	97	1
	11684	+14	+29	30	109	2		11698	-27	+25	34	12	2
	11695	+15	+24	26	73	2		11698	-25	+23	31	48	1
	11695	+16	+24	26	12	1		11694	-12	-29	35	109	1
	11695	+19	+24	28	36	4		11694	-11	-27	32	61	2
	11692	+26	+26	34	6	1		11694	-6	-28	32	16	3
	11680	+40	-29	50	12	3		11694	-4	-27	32	16	1
	11678	+42	-31	52	121	1		11694	-2	-29	33	16	2
	11676	+56	-14	59	97	1		11694	+3	-24	27	121	1
	(10)	(184)	(+3)		2284	66		11694	+4	-24	28	145	1
3.510	11696	-80	+17	80	48	1		11691	+5	-21	24	16	1
								11691	+13	-17	25	121	1
								11690	+9	+29	28	24	2
								11690	+13	+28	28	16	2
								11690	+15	+27	29	16	1
								11690	+17	+27	30	291	2

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U. T.	No.	Δl	φ	ρ	A	s	U. T.	No.	Δl	φ	ρ	A	s
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$		
	11684	+44	+32	50	24	1		11699	-22	-20	32	315	1
	11684	+51	+28	55	16	1		11700	-16	+21	23	315	2
	11684	+54	+28	58	121	1		11700	-14	+20	22	48	1
	11684	+56	+28	59	97	1		11700	-14	+18	21	48	1
	11684	+57	+27	60	97	1		11700	-12	+21	20	339	1
	11685	+47	+20	49	32	1		11700	-10	+19	18	36	1
	11695	+57	+25	60	24	2		11696	-6	+20	17	73	2
	(10)	(141)	(+3)		1924	34		11698	+12	+24	24	32	3
6,773	11701	-77	+15	77	194	3		11698	+16	+22	24	109	3
N-2	11701	-70	+14	70	145	4		11694	+26	-27	41	48	1
	11699	-58	-23	62	16	2		11694	+27	-27	42	24	1
	11699	-48	-21	54	364	1		11694	+41	-25	48	97	1
	11700	-43	+20	44	97	2		11694	+43	-25	50	73	1
	11700	-38	+19	41	24	1		11691	+54	-16	57	133	1
	11700	-37	+20	40	121	2		11690	+54	+27	57	36	1
	11696	-33	+19	35	73	1		11690	+55	+26	57	36	2
	11697	-31	-26	43	16	1		11690	+56	+24	58	73	2
	11697	-27	-26	41	12	1		11690	+57	+26	60	291	2
	11698	-14	+24	24	48	1		(10)	(101)	(+4)		2914	41
	11698	-10	+22	20	97	1	9,670	11703	-79	+31	80	73	1
	11694	0	-31	34	16	1	N-4	11703	-70	+32	71	145	1
	11694	+1	-28	32	97	1		11702	-66	+21	67	291	2
	11694	+2	-31	35	16	2		11702	-58	+17	58	48	2
	11694	+3	-27	32	32	2		11702	-54	+18	55	48	1
	11694	+4	-29	34	61	3		11701	-39	+14	41	109	4
	11694	+15	-25	33	97	1		11701	-38	+15	40	24	2
	11694	+16	-25	34	121	2		11701	-33	+14	35	12	1
	11690	+24	+27	33	24	2		11701	-32	+14	34	61	4
	11690	+26	+27	34	32	2		11699	-11	-21	26	279	2
	11690	+30	+26	36	315	1		11700	-5	+19	16	291	2
	11691	+26	-18	34	121	1		11700	-3	+19	16	48	2
	11685	+61	+19	62	16	2		11700	-2	+18	15	61	1
	11684	+66	+28	67	194	1		11700	0	+19	16	339	3
	11684	+69	+28	70	48	1		11696	+5	+19	16	48	1
	11684	+70	+27	71	24	1		11698	+23	+24	29	24	2
	(11)	(127)	(+4)		2421	43		11698	+26	+23	32	24	1
7,586	11702	-80	+16	80	388	1		11698	+27	+22	33	61	3
N-1	11701	-67	+14	67	242	1		11694	+39	-28	49	36	1
	11701	-61	+13	61	145	2		11694	+54	-24	60	73	2
	11699	-37	-22	45	339	1		11694	+55	-26	61	16	1
	11700	-32	+19	35	36	1		11694	+56	-24	61	24	1
	11700	-31	+21	35	97	1		11690	+64	+25	65	24	1
	11700	-30	+19	34	48	1		11690	+68	+27	69	121	1
	11700	-26	+20	30	388	2		11690	+69	+26	70	145	1
	11696	-23	+19	27	97	1		11691	+67	-16	70	97	2
	11697	-16	-26	34	48	1		(10)	(89)	(+4)		2522	45
	11698	-5	+25	22	32	1	10,574	11707	-86	+14	86	194	1
	11698	0	+23	19	121	1	N-2	11703	-65	+30	66	97	1
	11694	+13	-28	35	73	1		11703	-56	+32	59	145	1
	11694	+14	-27	34	16	1		11702	-53	+20	54	242	2
	11694	+15	-28	36	24	2		11702	-50	+19	52	32	2
	11694	+27	-24	39	109	1		11702	-45	+16	46	61	2
	11694	+29	-24	40	109	1		11702	-41	+16	42	48	1
	11690	+32	+29	39	16	1		11701	-26	+14	28	121	3
	11690	+34	+28	41	24	1		11701	-24	+14	26	48	3
	11690	+36	+28	43	36	1		11701	-20	+14	23	61	2
	11690	+40	+27	45	315	2		11699	+3	-21	25	364	2
	11691	+37	-15	43	145	1		11700	+6	+20	17	97	1
	11684	+79	+30	80	170	1		11700	+7	+20	18	97	1
	(11)	(117)	(+4)		3018	27		11700	+9	+20	19	97	2
8,742	11703	-82	+34	82	194	2		11700	+10	+18	18	36	1
N-2	11702	-79	+23	79	170	2		11700	+11	+21	19	315	1
	11702	-76	+22	77	36	2		11700	+13	+19	20	242	1
	11702	-73	+18	74	97	2		11696	+17	+20	24	36	1
	11702	-66	+19	67	73	1		11698	+35	+25	40	24	2
	11701	-51	+16	52	145	2		11698	+39	+24	43	16	1
	11701	-45	+15	46	73	3		11698	+40	+23	44	36	1
								11694	+51	-26	57	12	1
								11694	+52	-26	58	24	1

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U. T.	No.	Δl	φ	ρ	A	s	U. T.	No.	Δl	φ	ρ	A	s	
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$			
	11694	+68	-24	72	145	1		11702	-23	+19	27	61	2	
	11690	+80	+29	80	145	1		11702	-19	+16	24	61	2	
	11690	+82	+28	82	194	1		11702	-16	+16	21	73	1	
	11691	+80	-15	80	97	1		11702	-15	+17	21	121	4	
								11702	-15	+20	23	97	3	
	(11)	(77)	(+4)		3026	38		11701	- 5	+16	14	16	2	
								11701	- 3	+13	9	36	3	
11.507	11707	-75	+12	75	145	3		11701	- 1	+14	11	170	1	
N-4	11707	-75	+10	75	97	2		11701	0	+13	9	36	2	
	11707	-73	+14	73	242	2		11701	0	+15	12	16	1	
	11706	-69	-15	71	24	1		11701	+ 1	+14	11	121	1	
	11703	-53	+30	56	61	1		11701	+ 2	+13	9	36	2	
	11703	-50	+33	55	12	1		11701	+ 3	+14	11	97	1	
	11703	-50	+31	55	16	1		11701	+ 4	+15	12	73	2	
	11703	-48	+32	53	48	1		11701	+ 4	+14	11	48	2	
	11703	-46	+31	51	16	2		11701	+ 7	+14	13	36	1	
	11703	-44	+31	50	73	2		11710	+ 9	+29	27	36	1	
	11703	-43	+32	49	133	1		11710	+ 9	+31	28	24	3	
	11705	-43	-24	49	16	1		11709	+21	+26	29	24	2	
	11702	-40	+20	43	170	3		11709	+25	+26	33	61	1	
	11702	-38	+19	41	73	3		11708	+24	-28	40	24	1	
	11702	-35	+16	37	24	2		11708	+27	-26	41	48	2	
	11702	-33	+16	35	12	1		11699	+27	-22	37	109	1	
	11702	-30	+16	33	61	1		11699	+29	-21	37	145	2	
	11702	-28	+16	31	48	1		11700	+31	+21	34	97	1	
	11702	-28	+17	32	24	1		11700	+33	+21	37	97	2	
	11702	-27	+19	32	16	2		11700	+35	+22	39	242	1	
	11701	-16	+13	18	12	1		11700	+36	+21	39	73	1	
	11701	-14	+14	17	170	5		11700	+36	+19	39	73	3	
	11701	-13	+12	15	16	2		11696	+40	+20	43	12	1	
	11701	-11	+13	14	36	1		11698	+65	+24	66	12	1	
	11701	-10	+14	15	36	2								
	11701	- 9	+14	14	12	1		(12)	(51)	(+4)		2982	82	
	11701	- 8	+13	13	16	1		13.537	11707	-48	+14	49	73	1
	11701	- 7	+14	13	24	3	N-4	11707	-47	+12	48	12	3	
	11709	+ 8	+26	24	16	2		11707	-45	+15	46	109	3	
	11709	+ 9	+26	25	16	1		11703	-27	+36	41	12	1	
	11709	+12	+25	24	61	1		11703	-26	+31	36	32	1	
	11708	+13	-25	32	16	3		11703	-24	+32	36	24	1	
	11708	+14	-27	34	12	1		11703	-18	+32	33	16	1	
	11699	+15	-23	30	133	1		11703	-16	+32	31	73	3	
	11699	+16	-21	29	194	2		11702	-15	+21	23	73	1	
	11700	+19	+20	25	97	2		11702	-14	+20	22	48	2	
	11700	+23	+21	27	315	3		11702	-13	+21	21	12	1	
	11700	+24	+20	28	121	1		11702	-11	+21	19	16	2	
	11700	+24	+18	28	97	2		11702	-10	+18	17	36	4	
	11700	+25	+18	29	16	2		11702	- 9	+21	19	12	1	
	11696	+30	+20	34	16	1		11702	- 3	+16	13	97	2	
	11698	+48	+25	51	12	1		11702	- 2	+17	14	109	4	
	11698	+53	+23	55	24	1		11702	- 1	+19	16	24	1	
	11694	+65	-26	70	24	1		11702	+ 2	+18	15	12	2	
	11694	+80	-22	80	121	2		11701	+12	+13	15	24	2	
	(13)	(65)	(+4)		2924	75		11701	+14	+14	17	194	1	
								11701	+15	+14	18	97	1	
12.512	11707	-65	+11	65	16	1		11701	+16	+13	19	24	1	
N-3	11707	-63	+14	63	73	2		11701	+17	+14	20	194	3	
	11707	-61	+11	61	16	2		11701	+18	+14	21	32	3	
	11707	-59	+15	59	182	1		11701	+19	+14	23	24	1	
	11711	-56	+20	57	12	1		11701	+23	+13	25	12	1	
	11703	-41	+34	48	12	1		11710	+25	+29	35	12	1	
	11703	-40	+31	46	32	1		11708	+36	-29	48	32	2	
	11703	-37	+32	45	61	3		11708	+37	-27	48	12	1	
	11703	-33	+32	42	24	3		11708	+42	-27	51	61	4	
	11703	-31	+32	40	36	2		11709	+40	+26	44	61	1	
	11703	-29	+32	39	73	1		11699	+40	-23	47	61	4	
	11702	-28	+21	33	109	1		11699	+42	-21	47	121	1	
	11702	-27	+20	32	61	1		11700	+45	+21	46	97	1	
	11702	-25	+20	29	24	1		11700	+46	+21	47	97	1	
	11702	-25	+21	30	32	2		11700	+48	+19	50	48	4	
	11702	-24	+20	29	32	1		11700	+49	+22	52	194	2	
	11702	-24	+17	27	12	5		11700	+50	+21	53	73	2	

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U.T.	No.	Δl	φ	ρ	A	s	U.T.	No.	Δl	φ	ρ	A	s
	11700	+50	+18	52	24	3		11707	-7	+16	14	16	3
	(9)	(38)	(+4)		2284	74		11707	-4	+16	12	48	2
14.526	11712	-82	-17	82	242	1		11703	+15	+33	31	6	1
N-3	11707	-35	+14	36	32	1		11703	+19	+33	34	6	1
	11707	-34	+17	36	16	1		11703	+23	+34	36	12	1
	11707	-33	+14	35	24	1		11702	+23	+23	29	6	1
	11707	-30	+15	33	133	1		11702	+23	+21	27	12	1
	11703	-14	+29	29	24	2		11702	+35	+19	36	24	2
	11703	-14	+31	30	24	3		11702	+37	+18	39	36	1
	11703	-10	+32	29	16	1		11702	+38	+18	40	16	2
	11703	-4	+32	27	16	2		11701	+54	+15	55	242	2
	11703	-3	+32	28	36	1		11701	+57	+16	58	97	2
	11702	-2	+20	16	36	3		11713	+69	+16	70	36	1
	11702	0	+22	17	6	1		11713	+71	+17	72	48	3
	11702	+1	+19	16	36	2		11699	+85	-21	86	194	1
	11702	+3	+21	16	16	3		11700	+88	+21	88	242	2
	11702	+4	+18	15	48	5		(11)	(358)	(+5)		1480	34
	11702	+11	+20	19	6	1	17.508	11715	-66	-22	70	12	1
	11702	+11	+17	17	48	1	N-4	11715	-60	-23	64	145	1
	11702	+12	+18	19	73	3		11715	-57	-23	61	6	1
	11701	+25	+12	26	16	1		11712	-41	-17	46	218	1
	11701	+26	+14	28	242	1		11714	-16	+26	26	24	3
	11701	+28	+16	31	12	1		11714	-15	+26	26	6	1
	11701	+28	+13	30	16	3		11714	-13	+26	25	12	1
	11701	+31	+14	33	32	1		11714	-11	+25	23	48	3
	11701	+32	+15	34	121	1		11714	-8	+26	23	6	2
	11701	+33	+14	35	6	2		11716	-6	-23	28	12	1
	11699	+54	-23	60	48	1		11716	-4	-23	28	12	1
	11699	+56	-21	60	97	1		11707	+3	+16	12	6	1
	11709	+55	+25	56	36	1		11707	+5	+16	13	6	1
	11708	+58	-26	64	73	2		11707	+8	+16	14	16	1
	11700	+59	+20	60	85	2		11703	+24	+36	38	6	1
	11700	+62	+21	63	339	3		11703	+25	+33	36	12	3
	11700	+64	+18	65	32	1		11703	+34	+34	43	6	1
	11700	+66	+19	66	32	1		11703	+36	+34	44	12	1
	(9)	(25)	(+4)		2019	55		11702	+49	+18	51	16	1
15.592	11712	-67	-17	70	291	1		11702	+51	+19	53	6	1
N-3	11707	-16	+15	20	61	2		11702	+52	+20	54	6	1
	11703	+4	+32	27	32	1		11701	+66	+15	67	242	1
	11703	+10	+34	32	6	1		11701	+72	+16	73	61	1
	11703	+11	+32	29	24	1		11713	+82	+16	82	97	1
	11702	+10	+19	18	6	1		11713	+82	+18	82	73	1
	11702	+13	+20	21	6	1		(9)	(345)	(+5)		1066	32
	11702	+15	+20	23	12	1	18.506	11715	-47	-23	54	97	1
	11702	+16	+21	24	24	1	N-3	11712	-27	-17	35	218	1
	11702	+17	+21	24	16	1		11714	-6	+28	24	16	2
	11702	+25	+17	31	48	2		11714	-5	+27	23	12	1
	11702	+25	+15	32	12	1		11714	-4	+26	22	48	2
	11702	+26	+18	29	73	2		11714	-3	+25	22	16	1
	11701	+43	+15	44	242	1		11714	-2	+26	22	16	1
	11701	+44	+14	45	32	2		11714	-1	+24	21	16	2
	11701	+46	+16	46	194	1		11714	0	+24	20	16	3
	11713	+59	+17	60	12	1		11714	0	+25	21	73	4
	11713	+60	+16	60	24	1		11714	+3	+25	21	48	1
	11699	+70	-21	73	121	1		11714	+5	+26	22	16	2
	11709	+70	+25	71	24	1		11716	+6	-22	27	12	1
	11700	+75	+21	76	73	2		11703	+47	+34	54	6	1
	11700	+79	+21	80	436	1		11702	+63	+18	64	24	1
	11708	+76	-26	78	48	1		11701	+80	+16	80	242	1
	(10)	(11)	(+4)		1817	28		(7)	(332)	(+5)		876	25
16.517	11715	-74	-23	77	145	1	19.508	11715	-34	-23	44	121	1
N-5	11712	-55	-16	58	218	1	N-4	11712	-14	-16	25	218	1
	11714	-28	+26	34	24	2		11714	+6	+29	25	24	1
	11714	-27	+26	34	16	2		11714	+7	+26	23	61	3
	11714	-25	+25	31	24	1		11714	+8	+27	24	16	2
	11711	-12	+27	25	12	1		11714	+8	+25	23	16	2

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U. T.	No.	Δl	φ	ρ	A	s	U. T.	No.	Δl	φ	ρ	A	s	
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$			
	11714	+9	+26	24	48	1		11717	-49	-24	55	194	2	
	11714	+10	+26	24	97	5		11717	-45	-25	53	921	3	
	11714	+12	+26	25	61	4		11720	-30	-15	36	16	1	
	11714	+14	+25	25	182	10		11719	-13	-13	22	16	1	
	11714	+16	+25	26	36	1		11719	-11	-13	20	24	1	
	11702	+79	+18	80	32	1		11712	+40	-15	45	194	1	
	(4)	(319)	(+5)		912	32		11714	+56	+27	59	145	1	
								11714	+58	+29	60	97	1	
20,699	11715	-21	-22	34	85	2		11714	+59	+26	60	242	2	
M-4	11712	0	-15	20	182	1		11714	+62	+26	64	242	2	
	11714	+21	+30	33	12	1		11714	+64	+26	66	388	6	
	11714	+22	+27	31	145	15		11714	+66	+25	67	364	2	
	11714	+24	+28	33	24	5		11714	+71	+25	73	267	1	
	11714	+24	+27	33	73	9		(5)	(265)	(+5)		3594	29	
	11714	+25	+25	31	16	1								
	11714	+26	+26	34	73	10		24,593	11717	-45	-25	53	48	1
	11714	+29	+25	35	218	22		N-2	11717	-42	-24	50	12	1
	11714	+31	+26	36	12	3			11717	-40	-23	47	12	1
	11714	+33	+25	37	16	1			11717	-39	-25	48	267	2
	(3)	(303)	(+5)		856	70			11717	-38	-28	50	16	1
									11717	-36	-24	45	194	2
21,685	11717	-80	-22	81	145	1			11717	-36	-28	48	12	1
N-3	11717	-80	-24	82	242	1			11717	-34	-23	43	194	3
	11717	-71	-22	74	873	2			11717	-33	-26	45	73	3
	11719	-43	-13	46	16	1			11717	-31	-24	42	776	4
	11719	-40	-13	44	6	1			11719	+3	-13	18	24	2
	11715	-6	-23	28	48	1			11712	+55	-15	57	133	1
	11712	+15	-16	26	206	1			11714	+69	+27	70	145	1
	11714	+34	+27	39	85	1			11714	+70	+26	71	97	1
	11714	+35	+26	40	48	3			11714	+72	+25	73	145	1
	11714	+37	+26	41	109	2			11714	+75	+25	76	194	1
	11714	+39	+27	44	12	1			(4)	(252)	(+5)		2342	26
	11714	+39	+25	44	121	5								
	11714	+42	+26	45	24	2		25,669	11717	-31	-24	42	24	2
	11714	+43	+24	46	85	2		N-3	11717	-29	-22	39	61	3
	11714	+44	+24	47	145	2			11717	-29	-28	44	6	1
	11714	+45	+25	48	36	2			11717	-27	-24	40	194	1
	11714	+46	+24	49	16	1			11717	-27	-28	43	6	1
	(5)	(290)	(+5)		2217	29			11717	-25	-27	41	6	1
									11717	-24	-23	36	97	3
22,588	11717	-75	-22	77	242	1			11717	-23	-23	36	48	1
M-3	11717	-69	-24	73	194	1			11717	-22	-22	35	194	6
	11717	-68	-21	71	24	4			11717	-21	-24	35	48	2
	11717	-67	-23	71	145	4			11717	-18	-26	36	36	2
	11717	-63	-22	65	24	1			11717	-17	-24	34	727	3
	11717	-59	-22	64	727	5			11721	-1	+25	21	36	1
	11719	-32	-12	36	6	1			11721	0	+26	22	73	2
	11719	-32	-13	37	12	1			11721	+3	+26	22	24	1
	11719	-30	-14	35	12	1			11721	+4	+25	22	109	2
	11719	-27	-12	32	12	2			11719	+17	-13	25	12	1
	11719	-26	-12	31	16	3			11712	+70	-16	72	242	1
	11715	+5	-22	26	16	2			11714	+85	+27	85	145	1
	11712	+26	-15	33	170	1			(5)	(237)	(+5)		2088	35
	11714	+46	+27	51	291	9								
	11714	+47	+29	52	48	3		26,512	11723	-76	-27	79	145	1
	11714	+50	+28	54	12	2		N-4	11722	-65	+25	66	194	1
	11714	+50	+26	54	48	3			11722	-64	+24	65	6	1
	11714	+51	+27	54	194	9			11722	-62	+26	63	170	1
	11714	+52	+25	55	97	10			11722	-61	+24	62	6	1
	11714	+55	+25	56	61	10			11717	-18	-25	35	16	2
	11714	+56	+24	56	73	2			11717	-17	-23	32	73	2
	11714	+59	+25	60	170	8			11717	-17	-29	38	12	2
	(5)	(278)	(+5)		2594	83			11717	-16	-22	31	48	4
									11717	-15	-25	34	194	1
23,603	11717	-58	-25	63	121	2			11717	-13	-24	31	85	3
N-2	11717	-54	-23	59	48	1			11717	-11	-24	32	48	1
	11717	-53	-26	59	267	1			11717	-10	-23	29	48	1
	11717	-51	-25	56	48	1			11717	-9	-22	28	145	5
									11717	-6	-26	31	6	2

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U. T.	No.	Δl	φ	ρ	A	s	U. T.	No.	Δl	φ	ρ	A	s	
		$^{\circ}$	$^{\circ}$	$^{\circ}$					$^{\circ}$	$^{\circ}$	$^{\circ}$			
	11717	-5	-24	29	703	2		11723	-43	-26	54	48	2	
	11721	+8	+26	24	61	2		11723	-42	-27	54	32	2	
	11721	+9	+27	25	109	1		11723	-33	-24	45	61	3	
	11721	+10	+25	24	12	1		11722	-26	+28	34	24	6	
	11721	+13	+25	25	16	1		11722	-25	+27	33	12	6	
	11721	+15	+26	26	194	2		11722	-20	+26	28	16	7	
	11712	+80	-15	80	242	1		11722	-19	+26	27	24	1	
	(5) (226) (+5)				2533	38		11717	+24	-24	38	170	2	
27,524	11726	-85	-30	88	291	1		11717	+25	-19	36	6	1	
N-4	11725	-70	-35	77	97	1		11717	+26	-24	39	12	2	
	11723	-70	-29	76	242	1		11717	+27	-24	41	12	2	
	11723	-60	-27	66	267	1		11717	+30	-22	41	73	5	
	11722	-52	+25	54	12	2		11717	+33	-22	44	727	3	
	11722	-51	+26	54	12	2		11717	+34	-26	47	6	2	
	11722	-48	+26	52	6	1		11721	+50	+27	54	24	8	
	11722	-47	+26	52	16	1		11721	+56	+26	58	145	2	
	11722	-46	+25	50	61	1		11724	+61	+23	63	16	1	
	11717	-5	-24	29	16	1		(9) (186) (+6)				1949	93	
	11717	-3	-21	26	12	3								
	11717	-3	-24	29	194	1		30,508	11729	-83	+17	83	533	3
	11717	+1	-23	27	24	1		N-4	11728	-66	+23	67	16	2
	11717	+3	-23	27	61	1			11728	-65	+24	66	24	1
	11717	+4	-23	28	97	2			11728	-57	+22	59	48	2
	11717	+5	-27	34	12	1			11726	-40	-30	54	16	1
	11717	+6	-27	34	16	1			11726	-39	-29	53	145	1
	11717	+7	-24	30	727	2			11725	-37	-34	55	12	1
	11721	+21	+26	29	12	1			11725	-32	-34	51	24	2
	11721	+22	+27	30	97	3			11727	-35	-16	42	6	1
	11721	+24	+26	31	24	1			11727	-33	-17	40	36	4
	11721	+26	+25	33	36	1			11727	-31	-16	37	24	1
	11721	+27	+26	34	218	1			11727	-28	-16	36	48	2
	11724	+36	+21	38	12	1			11723	-31	-27	45	61	3
	(7) (213) (+5)				2562	32			11723	-30	-28	45	32	2
28,776	11726	-65	-28	73	218	1			11723	-21	-25	36	73	4
N-1	11723	-56	-26	65	121	1			11722	-6	+25	21	32	1
	11723	-55	-27	64	145	1			11717	+35	-25	46	6	1
	11723	-45	-25	55	194	1			11717	+36	-24	47	170	4
	11725	-56	-34	68	194	1			11717	+40	-23	49	16	1
	11722	-36	+26	40	24	1			11717	+43	-22	51	16	3
	11722	-30	+25	35	121	1			11717	+45	-21	52	824	1
	11717	+13	-26	35	194	1			11721	+67	+26	68	145	1
	11717	+14	-26	35	24	1			11724	+71	+22	71	32	2
	11717	+18	-23	35	194	1			(10) (173) (+6)				2339	44
	11717	+22	-24	37	873	2								
	11721	+39	+26	44	97	1		31,508	11730	-77	+12	77	533	1
	11721	+40	+25	44	97	1		N-4	11729	-77	+17	77	73	1
	11721	+44	+25	47	194	1			11729	-71	+16	71	679	3
	11724	+51	+21	53	16	1			11728	-53	+24	55	36	2
	(7) (196) (+6)				2706	16			11728	-46	+22	48	6	1
29,585	11728	-78	+25	78	24	1			11728	-44	+22	46	48	3
M-5	11728	-77	+26	77	97	5			11726	-26	-29	44	145	3
	11728	-69	+24	69	61	2			11727	-21	-17	31	48	4
	11726	-65	-26	71	12	1			11727	-20	-16	30	16	1
	11726	-64	-27	71	48	5			11727	-19	-17	31	36	2
	11726	-58	-26	66	16	1			11727	-17	-15	28	32	1
	11726	-53	-27	63	145	1			11727	-16	-15	27	48	1
	11725	-51	-33	64	16	1			11727	-15	-16	26	36	2
	11725	-49	-33	63	12	3			11727	-14	-16	26	97	1
	11725	-47	-33	61	12	1			11723	-19	-27	38	12	1
	11725	-46	-34	60	16	4			11723	-18	-28	39	6	2
	11725	-45	-33	59	16	1			11723	-7	-25	33	24	2
	11727	-47	-16	53	24	3			11722	+1	+27	22	24	1
	11727	-44	-15	49	6	3			11722	+6	+25	21	16	1
	11727	-43	-14	48	12	3			11717	+49	-24	58	145	2
	11727	-42	-14	47	12	1			11717	+52	-22	59	12	1
	11723	-44	-25	54	12	2			11717	+58	-21	64	873	1
									11721	+80	+26	79	145	1
									(9) (160) (+6)				3090	38

Mean for 31 days, $A = 2280$, $r = 128.8$